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10/031,291	01/14/2002	Takayuki Nakajima	9683/100	2536

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EXAMINER	
BADII, BEHRANG	
ART UNIT	**PAPER NUMBER**
3621	

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Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	**Application No.** 10/031,291	**Applicant(s)** NAKAJIMA ET AL.
	Examiner Behrang Badii	**Art Unit** 3621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 29 April 2005.

2a)☒ This action is **FINAL**. 2b)□ This action is non-final.

3)□ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-23 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)□ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-23 is/are rejected.

7)□ Claim(s) _____ is/are objected to.

8)□ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)□ The specification is objected to by the Examiner.

10)□ The drawing(s) filed on _____ is/are: a)□ accepted or b)□ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)□ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)□ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)□ All b)□ Some * c)□ None of:

1.□ Certified copies of the priority documents have been received.

2.□ Certified copies of the priority documents have been received in Application No. _____.

3.□ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) □ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) □ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) □ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) □ Notice of Informal Patent Application (PTO-152)

6) □ Other: _____.

Response to Arguments

Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

DETAILED ACTION

Claims 1-23 have been examined.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vatanen, U.S. patent 6,169,890, and further in view of Vilander et al., U.S. patent 6,553,219 and Laurance et al., U.S. patent 4,860,352.

As per claim 1, Vatanen discloses an authentication system (abstract, Fig. 3) comprising:

a plurality of receiving 'terminals for receiving a transaction request from a user (col.4, lines 8-38);

a mobile communication network for serving a plurality of mobile communication terminals (col.2, lines 58-65);

Vatanan does not disclose a first location memory storage device for storing location information (data) of each of said plurality of terminals;

a second location memory storage device for storing location information (data) of each of said plurality of mobile communication terminals;

a matching device for obtaining from said first location memory storage device location information (data) of a receiving terminal which has received a transaction request from a user, and for obtaining from said second location memory storage device location information of a mobile communication terminal of the user, and for comparing the location information of the receiving terminal and the location information of the mobile communication terminal of the user; and

an authentication device for determining a validity of said transaction request based upon a comparison result obtained from said matching device.

Laurance et al. discloses comparing the location information of the receiving terminal and the location information of the mobile communication terminal of the user (comparing location information; column 5, 50-67; column 6, 1-4 & 13-25).

Vilander et al. discloses a first location memory storage device for storing location information (data) of each of said plurality of terminals (Fig.1 and 3; col.1, 29-47; col.5, 15-43);

a second location memory storage device for storing location information (data) of each of said plurality of mobile communication terminals (Fig.1 and 3; col.1, 29-47; col.5, 15-43);

a matching device for obtaining from said first location memory storage device location information (data) of a receiving terminal which has received a transaction request from a user, and for obtaining from said second location memory storage device location information of a mobile communication terminal of the user (col.2, 35-53; col.3, 43-60; col.5, 15-43); and

an authentication device for determining a validity of said transaction request based upon a comparison result obtained from said matching device (col.2, 35-53; col.3, 43-60; col.5, 15-43).

It would have been obvious to modify Vatanen to include a first location memory storage device for storing a location of each of said plurality of terminals;

a second location memory storage device for storing a location of each of said plurality of mobile communication terminals;

a matching device for obtaining from said first location memory storage device a location of a receiving terminal which has received transaction request, and for obtaining from said second location

memory storage device a location of a mobile communication terminal, transmitting the transaction request, and matching each of said locations; and

an authentication device for determining a validity of said transaction request based upon a result obtained by said matching device upon comparing said locations such as that taught by Vilander et al. in and comparing the location information of the receiving terminal and the location information of the mobile communication terminal of the user (comparing location information) such as that taught by Laurance et al. in order to secure the transaction such that the correct user can carry out the transaction based upon the matching and authentication of the location of the mobile object and the receiving terminal.

As per claim 2, Vatanen further discloses a mobile communication terminal carried by the user is identified by identification information contained in said transaction request (col.1, lines 61-67; col.2, lines 1-4).

As per claim 3, Vatanen further discloses a cellular network including a plurality of base stations; and said second location storing device obtains location information of said mobile communication terminal by detecting a base station located near said mobile communication terminal (Fig.2; col.4, lines 8-38).

As per claim 4, Vilander et al. further discloses obtaining a location based upon radio waves transmitted from a satellite (Fig.1; col.3, lines 17-26; col.4, lines 5-32).

As per claim 5, Vatanen further discloses obtaining operation of a location of said mobile communication terminal by said second location storing device is initiated when said user operates said mobile communication terminal (Fig.2; col.4, lines 8-38).

As per claim 6, Vatanen further discloses receiving terminal is a communication terminal served by another communication network connected to said mobile communication network (abstract; Fig.3); and wherein, while said matching device is installed in said mobile communication network, said authentication device is installed in said another communication network (Vilander et al, col.5, lines 15-43) and (Vatanen, col.3, lines 8-14).

As per claim 7, Vatanen further discloses receiving terminal is a second mobile communication terminal served by said mobile communication network (abstract, Fig.3); and

wherein said first location storing device obtains location information of said receiving terminal for storage by detecting a base station located near said receiving terminal (Fig.2; col.4, lines 8-38).

As per claim 8, Vatanen further discloses receiving terminal is a second mobile communication terminal served by said mobile communication network (Fig.2; abstract; col.3, lines 56-67; col.4, lines 1-38); and

Vilander et al further discloses wherein said first location storing device obtains location information of said receiving terminal for storage based upon radio waves transmitted from a satellite (col.3, lines 17-26; col.4, lines 5-32).

As per claim 9 Vatanen further discloses an authentication system (Vatanen, Fig.3, abstract) comprising:

a plurality of receiving terminals for receiving a transaction request by reading, from an identification card (col.1, lines 61-67; col.2, lines 1-4) storing identification information of a user, identification information of the user (col.4, lines 8-38);

Vilander et al. further discloses a first location storing device for storing location information of each receiving terminal in association with identification information of said each receiving terminals (Fig. 1 and 3; col.1, lines 29-47; col.5, lines 15-43);

a second location storing device for storing location information of a mobile communication terminal of each user in association with identification information of said each user (Fig.1 and 3; col.1, lines 29-47; col.5, lines 15-43);

an authentication device for determining authenticity of said user based upon a comparison result obtained from said matching device (col.2, lines 35-53; col.3, lines 43-60; col.5, lines 15-43).

Vatanen does not disclose a matching device for reading location information of a receiving terminal, which has received a transaction request from a user, from said first location storing device by using identification information of the receiving terminal as a key, for reading location information of a mobile communication terminal of the user from said second location storing device by using identification information of the user as a key, and for comparing the location information of receiving terminal and the location information of the mobile communication terminal of the user.

Laurance et al. discloses a matching device for reading location information of a receiving terminal, which has received a transaction request from a user, from said first location storing device by using identification information of the receiving terminal as a key, for reading location information of a mobile communication terminal of the user from said second location storing device by using identification information of the user as a key, and for comparing the location information of receiving terminal and the location information of the mobile communication terminal of the user (comparing location information; col.5, 50-67; col.6, 1-4 & 13-25). It would have been obvious to modify

It would have been obvious to modify Vatanen to include a matching device for reading location information of a receiving terminal, which has received a transaction request from a user, from said first location storing device by using identification information of the receiving terminal as a key, for reading location information of a mobile communication terminal of the user from said second location storing device by using identification information of the user as a key, and for comparing the location information of receiving terminal and the location information of the mobile communication terminal of the user (comparing location information) such as that taught by Laurance et al. in order to secure the transaction such that the correct user can carry out the transaction based upon the matching and authentication of the location of the mobile object and the receiving terminal.

As per claim 10, Vatanen and Vilander et al. further disclose a database for retaining amount data indicating an amount available for said user in correspondence with said identification information regarding said user (Vatanen: col.4, 8-38; col.6, 46-51; claim 8);

wherein while said mobile communication terminal comprises a memory for storing the identification information regarding said user and a first communication interface for performing communication with said receiving terminal, said receiving terminal comprises a second communication interface for performing radio communication with said first communication interface of said mobile communication terminal (Vilander et al: col.3, 17-26; col.4, 5-32);

said mobile communication terminal transmits said identification information read out from said memory via said first communication interface (Vilander et al: Fig.2; abstract; col.2, 35-53; col.3, 43-60);

said receiving terminal receives said identification information via said second communication interface and transmits it to said authentication device (Vilander et al: Fig.2; abstract; col.2, 35-53; col.3, 43-60);

said authentication device determines authenticity of said user by referring to a transaction amount required for said transaction request and amount data stored in said database (Vatanen: col.4, 8-38; col.6,.46-51; claim 8) in correspondence with said received identification information in addition to the comparison result obtained from said matching device (Vilander et al: col.2, lines 35-53; col.3, lines 43-60; col.5, lines 15-43).

As per claim 11, Vatanen and Vilander et al. further disclose a mobile communication terminal storing amount data denoting an amount available for said user (Vatanen: col.4, 8-38; col.6, 46-51; claim 8) and transmits it together with said identification information read out from said memory via said first communication interface (Vilander et al: Fig.2; abstract; col.2, 35-53; col.3, 43-60); and

said receiving terminal determines authenticity (Vilander et al: col.2, lines 35-53; col.3, lines 43-60; col.5, lines 15-43) of said user by referring to a transaction amount required for said transaction request and said amount data transmitted from said mobile communication terminal (Vatanen: col.4, 8-38; col.6, 46-51; claim 8).

As per claim 12, Vilander et al. further discloses first communication interface and said second communication interface perform radio communication (Fig.1; col.3, 17-26; col.4, 5-32).

As per claim 13 and 14, Vatanen further discloses that the mobile communication terminal is a cellular telephone (title and abstract).

As per claim 15, Vatanen further discloses an authentication method (Fig.; abstract) (Fig.3; col.2, 58-65) comprising:

a step of receiving a transaction request from a user at receiving terminal (col.4, 8-38);

Vilander et al, further discloses a first location information obtaining step for obtaining location information of the receiving terminal which has received said transaction request (Fig. 1 and 3; col.1, lines 29-47; col.5, lines 15-43);

a second location information obtaining step for obtaining location information of a mobile communication terminal (Fig. 1 and 3; col.1, lines 29-47; col.5, lines 15-43); and a step for determining validity (authenticity) of the transaction request based upon the comparison result obtained in said matching step (col.2, lines 35-53; col.3, lines 43-60; col.5, lines 15-43).

Laurance et al. further discloses a step for comparing (matching) the location information of said receiving terminal obtained in (found by) said first location information obtaining (finding) step with the location information of said mobile communication terminal obtained in (found by) said second location finding step (comparing location information; column 5, 50-67; column 6, 1-4 & 13-25). It would have been obvious to modify Vatanen as discussed above.

As per claim 16, Vatanen further discloses a mobile communication terminal of the user is identified by identification information contained in said transaction request (col.1, 61-67; col.2, 1-4).

As per claim 17, Vatanen further discloses a cellular network in which a plurality of base stations are placed (title and abstract); and

said second location finding step includes obtaining (finds a) location information of said mobile communication terminal by detecting a base (mobile) station located near said mobile communication terminal (Fig.2; col.4, 8-38).

As per claim 18, Vilander et al. further discloses receiving an operation to request a location detection of said mobile communication terminal by said user at said mobile communication terminal;

wherein said step for obtaining (finding a) location information of said mobile communication terminal is initiated by reception of said operation (col.4, 66-67; col.5, 1-15).

As per claim 19, Vatanen, Vilander et al. and Laurance et al. (Vatanen: Fig.3, abstract) comprising:

a stepof receiving a transaction request at each receiving terminal (Vatanen: col.4, lines 8-38) by reading out identification information of this user from an ID card storing the identification information of the user is stored (Vatanen: col.1, 61-67; col.2, 1-4);

a step of reading out location information (Vilander et al.: col.1, 29-47) of the receiving terminal by using as (based upon) a key (Vatanen: col.4, 8-38) the identification information of the receiving terminal which has received said transaction request from a first database which stores identification information of each receiving terminal in association with (has stored in relation to) location information of said each receiving terminal (Vilander et al: Fig.1 and 3; col.1, 29-47; col.5, 15-43);

a step of reading out location information of the mobile communication terminal of the user by using a key (Vatanen: col.4, 8-38) the identification information of the user from a second database which stores identification information of each user in association with (has been stored in relation to) location information of said each mobile communication terminal (Vilander et al: Fig.1 and 3; col.1, 29-47; col.5, 15-43);

a step of comparing (matching) said read location information of the receiving terminal with said read location information of the mobile communication terminal (comparing location information) (Laurance et al.: column 5, 50-67; column 6, 1-4 & 13-25);

an authentication step of determining authenticity of said user based upon the comparison result obtained in said matching step. (Vilander et al.: col.2, 35-53; col.3, 43-60; col.5, 15-43).

As per claim 20, Vatanan and Vilander et al. further disclose a step of storing amount data indicating an amount available for said user in correspondence with said identification information on said user beforehand (Vatanen: col.4, 8-38; col.6, 46-51; claim 8);

a step of transmitting by (in which) said mobile communication terminal the identification information regarding said user to said receiving terminal (Vilander et al: Fig.2; abstract; col.2, 35-53; col.3, 43-60);

a step of receiving by (in which) said receiving terminal said identification information transmitted from said mobile communication terminal (Vilander et al: Fig.2; abstract; col.2, 35-53; col.3, 43-60); and

wherein said authentication step includes determining authenticity of said user by referring to a transaction amount required for said transaction request and said amount data which is stored (Vatanen: col.4, 8-38; col.6, 46-51; claim 8) in correspondence with said identification information received by said receiving terminal in addition to said comparison (matching) result (Vilander et al.: col.2, 35-53; col.3, 43-60; col.5, 15-43).

As per claim 21, Vatanen further discloses an authentication program for causing a computer to execute (Fig.3, abstract) (Fig.3, col. 2, 58-65);

Vilander et al. further discloses a first location information obtaining process (of location finding) for obtaining (finding) a location information of a receiving terminal which has received a transaction request from a user (Fig.1 and 3; col.1, 29-47; col.5, 15-43);

a second location information obtaining (finding) process for obtaining (finding) location information of a mobile communication terminal of the user (Fig.1 and 3; col.1, 29-47; col.5, 15-43);

a match process for comparing the (matching a) location information of said receiving terminal obtained in (which was found by) said first location information obtaining (finding) process with the location information of said mobile communication terminal obtained in (found by) said second location information obtaining (finding) process (comparing location information) (Laurance et al.: column 5, 50-67; column 6, 1-4 & 13-25);

an authentication process for determining authenticity of said user based upon said comparison (match) result obtained in the match process (col.2, 35-53; col.3, 43-60; col.5, 15-43).

As per claim 22, Vatanen, Vilander et al. and Laurance et al. further disclose an authentication program for causing a computer to execute (Vatanen: Fig.3, abstract) (Vatanen: Fig.3; col.2, 58-65);

a process of reading out location information (Vilander et al.: Fig.1 and 3; col.1, 29-47; col.5, 15-43) of a receiving terminal, which has received a transaction request from a user, by using a key (Vatanen: Col.4, 8-38) identification information of the receiving terminal from a first database which stores identification information of each receiving terminal in correspondence with location information of said each receiving terminal (Vilander et al.: Fig.1 and 3; col.1, 29-47; col.5, 15-43);

a process of reading out location information (Vilander et al.: Fig.1 and 3; col.1, 29-47; col.5, 15-43) of a mobile communication terminal of the user by using a key (Vatanen: Col.4, 8-38) identification information of the user from a second database which stores identification information of each user in correspondence with location information of said each mobile communication terminal (Vilander et al.: Fig.1 and 3; col.1, 29-47; col.5, 15-43);

a process for comparing (matching) said read location information of the receiving terminal with said read location information of the mobile communication terminal (comparing location information) (Laurance et al.: column 5, 50-67; column 6, 1-4 & 13-25);

a authentication process for determining authenticity of said user based upon said comparison (match) result obtained in the comparing process (Vilander et al.: col.2, 35-53; col.3, 43-60; col.5, 15-43).

As per claim 23, Vatanen et al. further discloses a computer-readable recording media storing the program (abstract, Fig.1).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ketcham (U.S. patent 6,075,860) discloses an apparatus and method for authentication and encryption of a remote terminal over a wireless link.

Ahvenainen (U.S. patent 6,199,161) discloses a management of authentication keys in a mobile communication system.

Ownens et al. (U.S. patent 6,338,140) discloses a method and system for validating subscriber identities in a communications network.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Behrang Badii whose telephone number is 571-272-6879. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Trammell can be reached on 571-272-6712. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 3600 Customer Service Office whose telephone number is **(703) 306-5771**.

Behrang Badii
Patent Examiner
Art Unit 3621

BB

Primary Examiner
3621